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**WHAT IS CLAIMED IS:**

1. An electrical connector for mounting to a substrate, comprising:  
an insulative connector housing having a first side, a second side opposite the first side, a first end, and a second end opposite the first end, the first and second ends including first and second hold-down tabs, respectively, for mounting said insulative connector housing to a substrate, said first hold-down tab located proximal the first side and said second hold-down tab located proximal the second side such that said first and second hold-down tabs are diagonal; and  
a plurality of contact pins held in the insulative connector housing.
2. An electrical connector according to claim 1, wherein said first hold-down tab is closer to the first side than the second side, and said second hold-down tab is closer to the second side than the first side.
3. An electrical connector according to claims 1 or 2, wherein said insulative connector housing further includes a stop plate extending laterally from the first side.
4. An electrical connector according to claims 1 or 2, wherein said insulative connector housing further includes a side wall disposed around said contact pins.
5. An electrical connector according to claim 4, wherein said insulative connector housing further includes a stop plate having first and second edge portions extending from said side wall and an end portion parallel to said side wall.
6. An electrical connector according to claim 5, wherein said stop plate includes at least one stand off on a mounting surface thereof.
7. An electrical connector according to claims 4 or 5, wherein said side wall comprises at least one polarization feature.

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8. An electrical connector according to claim 7, wherein said at least one polarization feature comprises an arrow-shaped projection.
  9. An electrical connector according to claim 7, wherein said at least one polarization feature comprises an arrow-shaped space defined by an interior surface of said side wall.
  10. An electrical connector according to any one of claims 1-9, wherein said insulative connector housing comprises metallic shielding embedded in a polymer material.
  11. An electrical connector according to any one of claims 1-10, wherein said insulative connector housing comprises a top face and a plurality of discrete buttresses extending from the top face, said contact pins being arranged in clusters around said buttresses.
  12. An electrical connector according to claim 11, wherein said insulative connector housing further comprises a side wall extending from the top face and surrounding said buttresses.
  13. An electrical connector according to claim 12, wherein said side wall comprises a first arrow-shaped projection adjacent the first end of the insulative connector housing and a second arrow-shaped projection adjacent the second end of the insulative connector housing, wherein said first and second arrow-shaped projections generally point toward the first side of the insulative connector housing.
  14. An electrical connector according to any one of claims 1-13, wherein:  
the first and second sides comprise a top and a bottom, respectively,  
said insulative connector housing further comprises a front face, and

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said contact pins extend from the front face in an array of clusters, wherein each cluster of contact pins is adapted to receive a corresponding cluster of pins to establish an electrical connection.

15. An electrical connector according to claim 14, wherein said insulative housing further comprises a side wall on the front face, said side wall surrounding the contact pins.

16. An electrical connector according to claim 15, wherein said side wall defines a first arrow-shaped space adjacent the first end of the connector housing and a second arrow-shaped space adjacent the second end of the connector housing, wherein said first and second arrow-shaped spaces generally point toward the top of the connector housing.

17. An electrical connector according to any one of claims 1-16, wherein at least one of said first and second hold-down tabs is configured to nest with a hold-down tab of another connector housing for mounting adjacent to said insulative connector housing on the substrate, thereby facilitating conservation of space on the substrate.

18. An electrical connector according to any one of claims 1-16, wherein said plurality of contact pins are held in said insulative connector housing in at least one row and wherein at least one of said first and second hold-down tabs is adapted to laterally overlap with a complementary hold-down tab of another electrical connector such that said at least one row of contact pins aligns with a corresponding row of contact pins of said another electrical connector.

19. An electrical connector according to any one of claims 1-16, wherein said plurality of contact pins are held in said insulative connector housing in at least one row of contact pins and wherein the first end of said insulative connector housing is adapted to merge with a complementary end of another electrical connector, such that said at least one row of

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contact pins is aligned with a corresponding row of contact pins of said another electrical connector.

20. An electrical connector according to any one of claims 1-16, wherein the first end of said insulative connector housing is adapted for end-to-end nesting with an end of another insulative connector housing.

21. An electrical connector according to any one of claims 1-20, wherein said insulative connector housing comprises separate first and second end pieces and a separate center piece, said end pieces being coupled to opposite ends of said center piece.

22. An electrical connector according to any one of claims 1-21, further comprising a polarization cap detachably connected to said insulative connector housing, said polarization cap having one or more polarization features.

23. An electrical connector according to claim 22, wherein said polarization cap has a plurality of holes configured for receiving contact pins of another electrical connector for contact with said contact pins.

24. An electrical connector according to claims 22 or 23, wherein said polarization cap comprises a hollow for housing said contact pins.

25. An electrical connector according to claims 22 or 24, wherein an outer periphery of said polarization cap defines said one or more polarization features.

26. An electrical connector according to claim 25, wherein said one or more polarization features comprises an arrow-shaped projection.

27. An electrical connector according to claim 25, wherein said one or more polarization features comprises a rounded projection.

28. An electrical connector according to claim 25, wherein said one or more polarization features comprises an arrow-shaped projection and a rounded projection.

29. An electrical connector according to any one of claims 22-28, wherein said polarization cap comprises a plurality of clips adapted for detachably connecting to the electrical insulative housing.

30. An electrical connector assembly, comprising:  
a male connector comprising a male connector housing and a plurality of male contact pins held in said male connector housing in at least one row, said male connector housing having first and second staggered mounting extensions for mounting said male connector housing to a first substrate; and

a female connector comprising a female connector housing and a plurality of female contact pins held in said female connector housing in at least one row, said female connector housing having first and second staggered mounting extensions for mounting said female connector housing to a side of a second substrate,

wherein at least a portion of said male connector is adapted to be received within said female connector such that said male contact pins contact said female contact pins to establish an electrical connection therebetween.

31. The electrical connector assembly according to claim 30, wherein said male connector housing includes a polarization feature and said female connector housing includes a complementary polarization feature, whereby electrical connection between the male connector and the female connector may occur in one orientation of the male and female connector housings.

32. The electrical connector assembly according to claim 31, wherein said polarization feature of said male connector housing comprises an arrow-shaped projection and wherein said polarization feature of said female connector housing comprises an arrow-shaped space.

33. The electrical connector assembly according to any one of claims 30-32, wherein said male connector comprises a first male connector and said female connector comprises a first female connector, and further comprising:

a second male connector comprising a second male connector housing and a plurality of male contact pins held in said second male connector housing in at least one row, said second male connector housing having first and second staggered mounting extensions for mounting said second male connector housing to the first substrate, wherein said first mounting extension of said first male connector housing and said second mounting extension of said second male connector housing nest together when mounted to the first substrate such that said at least one row of contact pins of said first male connector aligns with said at least one row of contact pins of said second male connector; and

a second female connector comprising a second female connector housing and a plurality of female contact pins held in said second female connector housing in at least one row, said second female connector housing having first and second staggered mounting extensions for mounting said second female connector housing to the side of the second substrate, wherein said first mounting extension of said first female connector housing and said second mounting extension of said second female connector housing nest together when mounted to the side of the second substrate such that said at least one row of contact pins of said first female connector aligns with said at least one row of contact pins of said second female connector,

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wherein at least a portion of said second male connector is adapted to be received within said second female connector such that said male pins of said second male connector contact said female pins of said second female connector to establish an electrical connection therebetween.

34. Apparatus for permitting mating of first and second electrical connectors in a single orientation comprising a polarization cap adapted for detachable connection to a face of the first electrical connector, the polarization cap having one or more polarization features and a plurality of holes configured for receiving electrical contacts of the second electrical connector for contacting electrical contacts of the first electrical connector.

35. Apparatus according to claim 34, wherein said polarization cap comprises a hollow for housing the electrical contacts of the first electrical connector.

36. Apparatus according to claims 34 or 35, wherein a periphery of said polarization cap defines said one or more polarization features.

37. Apparatus according to claim 36, wherein said one or more polarization features comprises an arrow-shaped projection.

38. Apparatus according to claim 36, wherein said one or more polarization features comprises a rounded projection.

39. Apparatus according to claim 36, wherein said one or more polarization features comprises an arrow-shaped projection and a rounded projection.

40. Apparatus according to any one of claims 34-39, wherein said polarization cap comprises a plurality of clips adapted for detachably connecting to the first electrical connector.

41. An electrical connector for mounting to a substrate, comprising:  
an insulative mounting element having a first face and a second face;

a plurality of contact pins each having a contact portion and a tail portion, said contact pins held in the insulative mounting element such that the contact portions extend from the first face and the tail portions extend from the second face; and

a polarization cap detachably connected to said insulative mounting element to cover at least a portion of the first face, said polarization cap having at least one polarization feature and a plurality of openings for permitting access to the contact portions of said contact pins.

42. An electrical connector according to claim 41, wherein said insulative mounting element further includes a stop plate extending laterally from the first face.

43. An electrical connector according to claims 41 or 42, wherein said at least one polarization feature is formed on an outer periphery of said polarization cap.

44. An electrical connector according to claim 43, wherein said at least one polarization feature comprises an arrow-shaped projection.

45. An electrical connector according to any one of claims 41-44, wherein said polarization cap comprises metallic shielding embedded in a polymer material.

46. An electrical connector according to any one of claims 41-45, wherein said contact portions of said contact pins extend from the first face of said insulative mounting element in an array of clusters, wherein each cluster of contact pins is adapted to receive a corresponding cluster of pins through one of the openings in said polarization cap to establish an electrical connection.

47. An electrical connector according to any one of claims 41-46, wherein said insulative mounting element comprises first and second hold-down tabs diagonally disposed at first and second ends, respectively, of the insulative mounting element.



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48. An electrical connector according to claim 47, wherein at least one of said first and second hold-down tabs is configured to nest with a hold-down tab of another insulative mounting element for mounting adjacent to said insulative mounting element on the substrate, thereby facilitating conservation of space on the substrate.

49. An electrical connector according to claim 47, wherein said plurality of contact pins are held in said insulative mounting element in at least one row and wherein at least one of said first and second hold-down tabs is adapted to laterally overlap with a complementary hold-down tab of another electrical connector such that said at least one row of contact pins aligns with a corresponding row of contact pins of said another electrical connector.

50. An electrical connector according to claim 47, wherein said plurality of contact pins are held in said insulative mounting element in at least one row of contact pins or clusters of contact pins and wherein the first end of said insulative mounting element is adapted to merge with a complementary end of another electrical connector, such that said at least one row is aligned with a corresponding row of contact pins or clusters of contact pins of said another electrical connector.

51. An electrical connector according to claim 47, wherein the first end of said insulative mounting element is adapted for end-to-end nesting with an end of another insulative mounting element.